

CLAIMS

1. A fusible resistor, comprising:
a resistor body;
5 a fusible element layer, which surrounds the resistor body and is fusible when a current over a predetermined current value is applied to the resistor body;
caps, which surround ends of the fusible element layer;
lead wires, which are attached to the caps; and
an insulating layer for insulating the fusible element layer and the caps.
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2. The fusible resistor of Claim 1, wherein the fusible element layer further comprises at least copper.
3. The fusible resistor of Claim 1, wherein the fusible element layer further
15 comprises a material having a temperature coefficient of over 2,000 ppm/°C and a resistivity of 1×10^{-8} to $50 \times 10^{-8} \Omega \cdot m$ (ohm/meter).
4. The fusible resistor of Claim 1, further comprising an anti-oxidation layer, which surrounds the fusible element layer.
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5. The fusible resistor of Claim 4, wherein the anti-oxidation layer further comprises at least a silver paste.
6. The fusible resistor of Claim 1 or 4, further comprising a conductive layer,
25 which is formed between the resistor body and the fusible element layer and made of a conductive material.
7. The fusible resistor of Claim 4, wherein the conductive layer further comprises at least nickel and chrome.
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8. The fusible resistor of Claim 6, further comprising a groove, which is formed through the fusible element layer, the anti-oxidation layer, and the conductive layer to reach the resistor body.
- 35 9. The fusible resistor of Claim 8, wherein the groove is in the form of a spiral along a circumference of the fusible resistor.

10. A method of fabricating a fusible resistor, comprising the steps of:
preparing a resistor body;
forming a fusible element layer, which surrounds the resistor body and is
fusible when a current over a predetermined current value is applied to the resistor
5 body;
forming caps, which surround ends of the fusible element layer;
forming lead wires, which are attached to the caps; and
forming an insulating layer for insulating the fusible element layer and the
caps.
- 10 11. The method of Claim 10, wherein the fusible element layer further comprises
at least copper.
12. The method of Claim 10, wherein the fusible element layer further comprises
15 a material having a temperature coefficient of over 2,000 ppm/°C and a resistivity of
 1×10^{-8} to $50 \times 10^{-8} \Omega \cdot m$ (ohm/meter).
13. The method of Claim 10, further comprising a step of forming an anti-
oxidation layer, which surrounds the fusible element layer.
- 20 14. The method of Claim 13, wherein the anti-oxidation layer further comprises at
least a silver paste.
15. The method of Claim 10 or 13, further comprising a step of forming a
25 conductive layer, which is formed between the resistor body and the fusible element
layer and made of a conductive material.
16. The method of Claim 15, wherein the conductive layer further comprises at
least nickel and chrome.
- 30 17. The method of Claim 15, further comprising a step of forming a groove, which
is formed through the fusible element layer, the anti-oxidation layer, and the
conductive layer to reach the resistor body.
- 35 18. The method of Claim 17, wherein the groove is in the form of a spiral along a
circumference of the fusible resistor.